

$$\text{mass of car} = 34.6 \text{ g}$$

2/7/08

$$34.6 \text{ g} = 0.0346 \text{ Kg}$$

0.0346

$$\text{Weight of Car} = 0.0346 \times 10 = 0.346 \text{ N}$$

$$\text{Height of Ramp} = 14.5 \text{ cm} = 0.145 \text{ m}$$

$$\text{Length} = 0.9 \text{ m}$$

Times:

$$1.69 \text{ s}, 1.60 \text{ s}, 1.44$$

$$\text{Average} = \frac{1.69 + 1.60 + 1.44}{3}$$

$$= 1.58 \text{ sec.}$$

$$\text{Average Speed} = \frac{\text{length of ramp}}{\text{average time}}$$

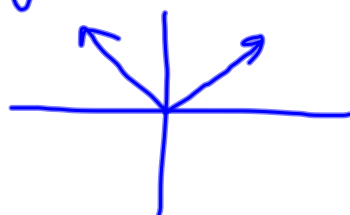
$$= \frac{0.9 \text{ m}}{1.58 \text{ s}} = 0.5696 \text{ m/s}$$

$$\begin{aligned}\text{Final Speed} &= \text{Avg Speed} \times 2 \\ &= 0.5696 \times 2 \\ &= 1.1392 \text{ m/s}\end{aligned}$$

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Ex. 1

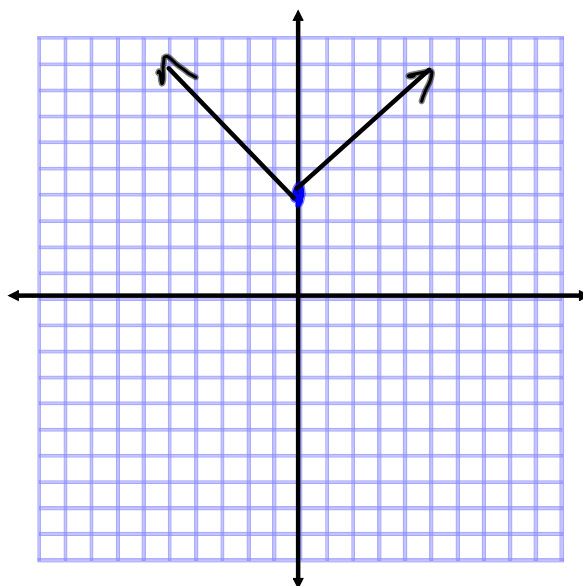
$$y = |x| \text{ absolute value}$$



$$y = |x| + a \leftarrow \begin{array}{l} \text{y intercept} \\ \text{(move it)} \\ \text{up} \end{array}$$

(translation)

QC 2a - $y = |x| + 4$



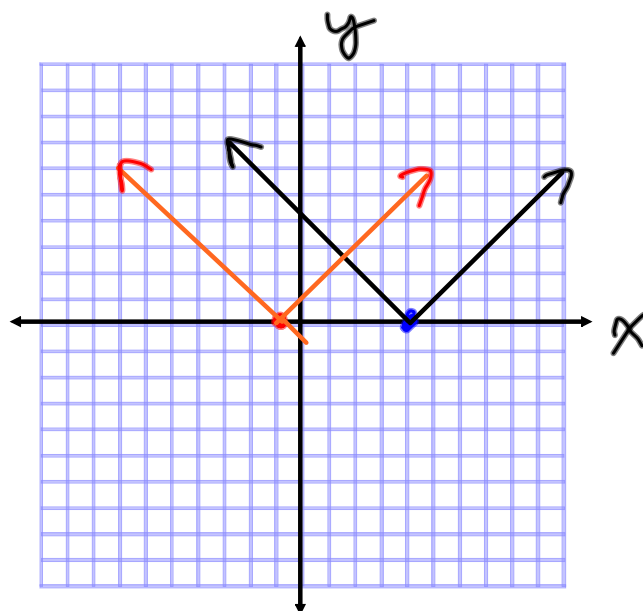
$y = |x - 3|$ moves to the right 3 places
 and $y = |x + 3|$ moves to the left 3 places

Horizontal Translation

QC 4 $y = |x - 4|$

$$y = |x - 4|$$

$$y = |x + 1|$$



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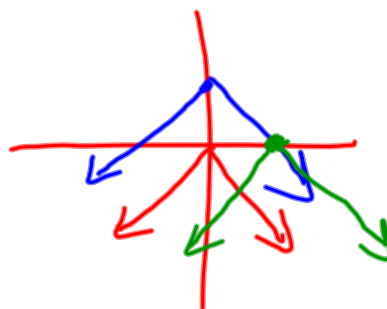
22. $y = |x + 9|$

23. $y = |x - 9|$

28. $y = -|x|$

$y = -|x| + 3$

31. $y = -|x - 3|$



19. \$75/week 25% commission

Let p = weekly pay

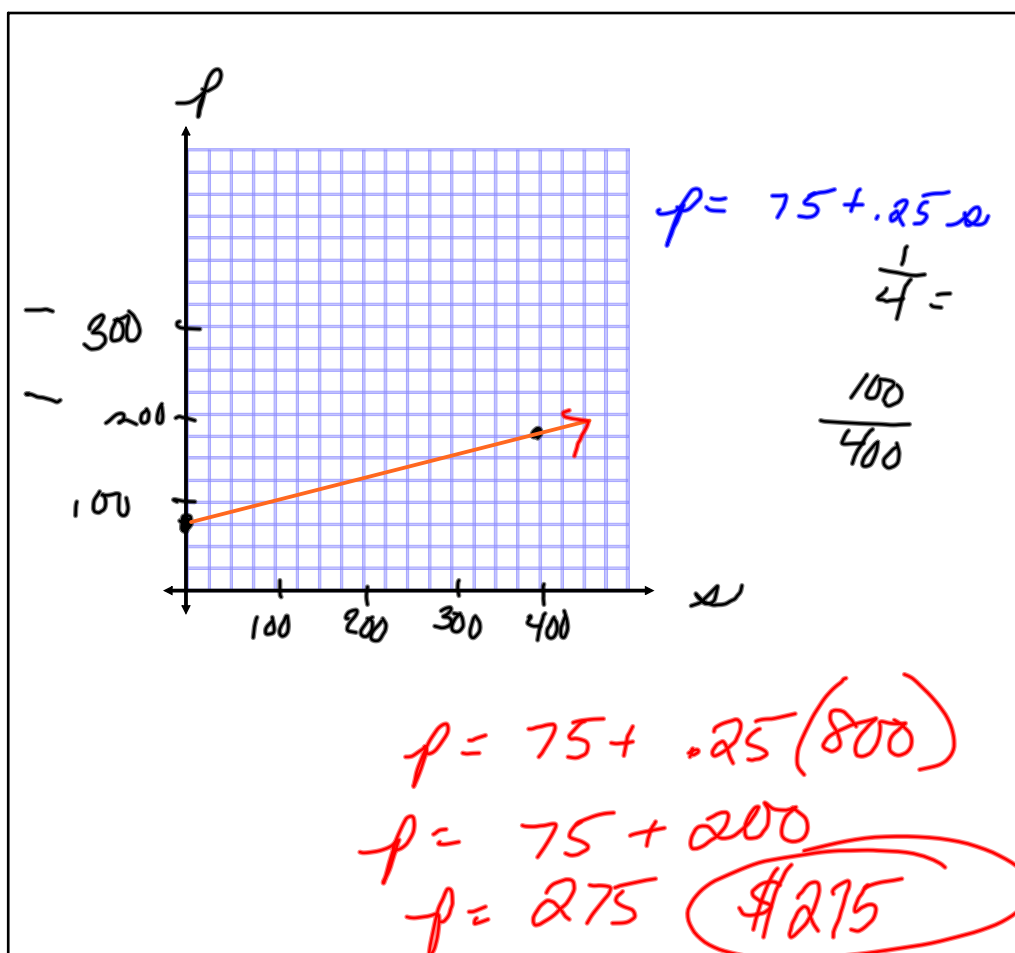
Let x = weekly sales

Relation

The pay is \$75 plus .25 of the sales.

a) $p = 75 + 0.25x$

b.



p. 367 # 33, 34

33. parallel to $y = 5x - 2$ through $(2, -1)$

$$m = 5$$

$$y - (-1) = 5(x - 2)$$

$$y + 1 = 5(x - 2)$$

or

$$y = 5x - 11$$

34. Perpendicular to $y = -3x + 7$ through $(3, 5)$

$$m = \frac{1}{3}$$

$$y - 5 = \frac{1}{3}(x - 3)$$

$$y = \frac{1}{3}x + 4$$

37. $(9, 30)(1, 5)$

$$m = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$= \frac{30 - 5}{9 - 1} = \frac{25}{8}$$

$$m = \frac{25}{8}$$

$$y - 5 = \frac{25}{8}(x - 1)$$

$$y = \frac{25}{8}x + \frac{15}{8}$$